SEQUENCE LISTING

<110>	Warner-Lambert Company LLC Bove, Susan R Kilgore, Kenneth					
<120>	Methods of Treating Osteoarthritis with IL-6 Antagonists					
<130>	PC32145A					
<150> <151>	60/543,814 2004-02-11					
<160>	12					
<170>	PatentIn version 3.3					
<210> <211> <212> <213>	1 636 DNA Mus musculus					
<400>	1	60				
	ttcc tctctgcaag agacttccat ccagttgcct tcttgggact gatgctggtg	60				
	acgg ccttccctac ttcacaagtc cggagaggag acttcacaga ggataccact	120				
	agac ctgtctatac cacttcacaa gtcggaggct taattacaca tgttctctgg	180				
	gtgg aaatgagaaa agagttgtgc aatggcaatt ctgattgtat gaacaacgat	240				
gatgcad	cttg cagaaaacaa tctgaaactt ccagagatac aaagaaatga tggatgctac	300				
caaactg	ggat ataatcagga aatttgccta ttgaaaattt cctctggtct tctggagtac	360				
catagct	tacc tggagtacat gaagaacaac ttaaaagata acaagaaaga caaagccaga	420				
gtccttc	caga gagatacaga aactctaatt catatcttca accaagaggt aaaagattta	480				
cataaaa	atag tccttcctac cccaatttcc aatgctctcc taacagataa gctggagtca	540				
cagaagg	gagt ggctaaggac caagaccatc caattcatct tgaaatcact tgaagaattt	600				
ctaaaag	gtca ctttgagatc tactcggcaa acctag	636				
<210> 2 <211> 211 <212> PRT <213> Mus musculus						
<400>. 2						
Met Lys Phe Leu Ser Ala Arg Asp Phe His Pro Val Ala Phe Leu Gly 1 5 10 15						
Leu Met Leu Val Thr Thr Ala Phe Pro Thr Ser Gln Val Arg Arg						

20 25 30

Gly Asp Phe Thr Glu Asp Thr Thr Pro Asn Arg Pro Val Tyr Thr Thr 35 40 45

Ser Gln Val Gly Gly Leu Ile Thr His Val Leu Trp Glu Ile Val Glu 50 60 Met Arg Lys Glu Leu Cys Asn Gly Asn Ser Asp Cys Met Asn Asn Asp 65 70 75 80 Asp Ala Leu Ala Glu Asn Asn Leu Lys Leu Pro Glu Ile Gln Arg Asn 85 90 95 Asp Gly Cys Tyr Gln Thr Gly Tyr Asn Gln Glu Ile Cys Leu Leu Lys 100 105 110 Ile Ser Ser Gly Leu Leu Glu Tyr His Ser Tyr Leu Glu Tyr Met Lys 115 120 125 Asn Asn Leu Lys Asp Asn Lys Lys Asp Lys Ala Arg Val Leu Gln Arg 130 135 140 Asp Thr Glu Thr Leu Ile His Ile Phe Asn Gln Glu Val Lys Asp Leu 145 150 155 160 His Lys Ile Val Leu Pro Thr Pro Ile Ser Asn Ala Leu Leu Thr Asp 165 170 175 Lys Leu Glu Ser Gln Lys Glu Trp Leu Arg Thr Lys Thr Ile Gln Phe 180 185 190Ile Leu Lys Ser Leu Glu Glu Phe Leu Lys Val Thr Leu Arg Ser Thr 195 200 205 Arg Gln Thr 210 <210> 636 DNA Rattus norvegicus <213> <400> atgaagtttc tctccgcaag agacttccag ccagttgcct tcttgggact gatgttgttg

<400> 3
atgaagtttc tctccgcaag agacttccag ccagttgcct tcttgggact gatgttgttg 60
acagccactg ccttccctac ttcacaagtc cggagaggag acttcacaga ggataccacc 120
cacaacagac cagtatatac cacttcacaa gtcggaggct taattacata tgttctcagg 180
gagatcttgg aaatgagaaa agagttgtgc aatggcaatt ctgattgtat gaacagcgat 240
gatgcactgt cagaaaacaa tctgaaactt ccagaaatac aaagaaatga tggatgcttc 300
caaactggat ataaccagga aatttgccta ttgaaaatct gctctggtct tctggagttc 360

cgtttctacc	tggagtttgt	gaagaacaac	ttacaagata	acaagaaaga	caaagccaga	420
gtcattcaga	gcaatactga	aaccctagtt	catatcttca	aacaagagat	aaaagactca	480
tataaaatag	tccttcctac	cccaacttcc	aatgctctcc	taatggagaa	gttagagtca	540
cagaaggagt	ggctaaggac	caagaccatc	caactcatct	tgaaagcact	tgaagaattt	600
ctaaaggtca	ctatgaggtc	tactcggcaa	acctag			636

<210> 4

<400> 4

Met Lys Phe Leu Ser Ala Arg Asp Phe Gln Pro Val Ala Phe Leu Gly $1 \hspace{1cm} 10 \hspace{1cm} 15$

Leu Met Leu Leu Thr Ala Thr Ala Phe Pro Thr Ser Gln Val Arg Arg 20 25 30

Gly Asp Phe Thr Glu Asp Thr Thr His Asn Arg Pro Val Tyr Thr Thr 35 40 45

Ser Gln Val Gly Gly Leu Ile Thr Tyr Val Leu Arg Glu Ile Leu Glu 50 60

Met Arg Lys Glu Leu Cys Asn Gly Asn Ser Asp Cys Met Asn Ser Asp 65 70 75 80

Asp Ala Leu Ser Glu Asn Asn Leu Lys Leu Pro Glu Ile Gln Arg Asn 85 90 95

Asp Gly Cys Phe Gln Thr Gly Tyr Asn Gln Glu Ile Cys Leu Leu Lys 100 105 110

Ile Cys Ser Gly Leu Leu Glu Phe Arg Phe Tyr Leu Glu Phe Val Lys 115 120 125

Asn Asn Leu Gln Asp Asn Lys Lys Asp Lys Ala Arg Val Ile Gln Ser 130 135 140

Asn Thr Glu Thr Leu Val His Ile Phe Lys Gln Glu Ile Lys Asp Ser 145 150 155 160

Tyr Lys Ile Val Leu Pro Thr Pro Thr Ser Asn Ala Leu Leu Met Glu 165 170 175

<211> 211

<212> PRT

<213> Rattus norvegicus

Lys Leu Glu Ser Gln Lys Glu Trp Leu Arg Thr Lys Thr Ile Gln Leu 180 185 190

Ile Leu Lys Ala Leu Glu Glu Phe Leu Lys Val Thr Met Arg Ser Thr 195 200 205

Arg Gln Thr 210

<210> 5 <211> 639 <212> DNA <213> Human

atquactcct tctccacaag cgccttcggt ccagttgcct tctccctqqq gctqctcctq 60 gtgttgcctg ctgccttccc tgccccagta cccccaggag aagattccaa agatgtagcc 120 gccccacaca gacagccact cacctcttca gaacgaattg acaaacaaat tcggtacatc 180 ctcqacqqca tctcagccct gagaaaggag acatgtaaca agagtaacat gtgtgaaagc 240 agcaaagagg cactggcaga aaacaacctg aaccttccaa agatggctga aaaagatgga 300 360 tgcttccaat ctggattcaa tgaggagact tgcctggtga aaatcatcac tggtcttttg qaqtttgagg tatacctaga gtacctccag aacagatttg agagtagtga ggaacaagcc 420 480 aqaqctqtqc agatgagtac aaaagtcctg atccagttcc tgcagaaaaa ggcaaagaat ctagatgcaa taaccaccc tgacccaacc acaaatgcca gcctgctgac gaagctgcag 540 gcacagaacc agtggctgca ggacatgaca actcatctca ttctgcgcag ctttaaggag 600 ttcctgcagt ccagcctgag ggctcttcgg caaatgtag 639

<210> 6 <211> 212 <212> PRT <213> Human

<400> 6

Met Asn Ser Phe Ser Thr Ser Ala Phe Gly Pro Val Ala Phe Ser Leu 10 15

Gly Leu Leu Val Leu Pro Ala Ala Phe Pro Ala Pro Val Pro Pro 20 25 30

Gly Glu Asp Ser Lys Asp Val Ala Ala Pro His Arg Gln Pro Leu Thr 35 40 45

Ser Ser Glu Arg Ile Asp Lys Gln Ile Arg Tyr Ile Leu Asp Gly Ile $50 \hspace{1cm} 55 \hspace{1cm} 60$

Ser Ala Leu Arg Lys Glu Thr Cys Asn Lys Ser Asn Met Cys Glu Ser Ser Lys Glu Ala Leu Ala Glu Asn Asn Leu Asn Leu Pro Lys Met Ala Glu Lys Asp Gly Cys Phe Gln Ser Gly Phe Asn Glu Glu Thr Cys Leu Val Lys Ile Ile Thr Gly Leu Leu Glu Phe Glu Val Tyr Leu Glu Tyr Leu Gln Asn Arg Phe Glu Ser Ser Glu Glu Glu Gln Ala Arg Ala Val Gln Met Ser Thr Lys Val Leu Ileo Gln Phe Leu Gln Lys Lys Ala Lys Asn 160

Leu Asp Ala Ile Thr Thr Pro Asp Pro Thr Thr Asn Ala Ser Leu Leu 165 170 175

Thr Lys Leu Gln Ala Gln Asn Gln Trp Leu Gln Asp Met Thr Thr His 180 185 190

Leu Ile Leu Arg Ser Phe Lys Glu Phe Leu Gln Ser Ser Leu Arg Ala 195 200 205

Leu Arg Gln Met 210

<210> 7 <211> 1323

<212> DNA <213> Mus musculus

<400> atgctgaccg tcggctgcac gctgttggtc gccctgctgg ccgcgcccgc ggtcgcgctg 60 gtcctcggga gctgccgcgc gctggaggtg gcaaatggca cagtgacaag cctgccaggq 120 gccaccgtta ccctgatttg ccccgggaag gaagcagcag gcaatgttac cattcactgg 180 gtgtactctg gctcacaaaa cagagaatgg actaccacag gaaacacact ggttctgagg 240 gacgtgcagc tcagcgacac tggggactat ttatgctccc tgaatgatca cctggtgggg 300 actgtgccct tgctggtgga tgttccccca gaggagccca agctctcctg cttccggaag 360 aacccccttg tcaacgccat ctgtgagtgg cgtccgagca gcaccccctc tccaaccacg 420 aaggctgtgc tgtttgcaaa gaaaatcaac accaccaacg ggaagagtga cttccaggtg 480

ccctgccagt at	tctcagca g	gctgaaaagc	ttctcctgcc	aggtggagat	cctggagggt	540
gacaaagtat ac	cacatagt g	gtcactgtgc	gttgcaaaca	gtgtgggaag	caagtccagc	600
cacaacgaag cg	tttcacag d	cttaaaaatg	gtgcagccgg	atccacctgc	caaccttgtg	660
gtatcagcca ta	cctggaag g	gccgcgctgg	ctcaaagtca	gctggcagca	ccctgagacc	720
tgggacccga gt	tactactt g	gctgcagttc	cagcttcgat	accgacctgt	atggtcaaag	780
gagttcacgg tg	ttgctgct c	cccggtggcc	cagtaccaat	gcgtcatcca	tgatgccttg	840
cgaggagtga ag	cacgtggt c	ccaggtccgt	gggaaggagg	agcttgacct	tggccagtgg	900
agtgaatggt cc	ccagaggt c	cacgggcact	ccttggatag	cagagcccag	gaccaccccg	960
gcaggaatcc tc	tggaaccc c	cacacaggtc	tctgttgaag	actctgccaa	ccacgaggat	1020
cagtacgaaa gt	tctacaga a	agcaacgagt	gtcctcgccc	cagtgcaaga	atcctcgtcc	1080
atgtccctgc cc	acattcct g	ggtagctgga	ggaagcttgg	cgtttgggtt	gcttctctgt	1140
gtcttcatca tc	ctgtgttg g	ggagccgcgc	ccacattcgc	cgttacaaga	tggcgctgac	1200
agctgtgttc ta	agtggtaa a	acaaataatc	tgcgcatgtg	ccgagggtgg	ttctccactc	1260
catgtgctct gc	cttccccg t	gacgtcaac	tcggccgatg	ggctgcagcc	aatcagggag	1320
tga						1323

<210> 8 <211> 364 <212> PRT

<213> Mus musculus

<400> 8

Met Leu Thr Val Gly Cys Thr Leu Leu Val Ala Leu Leu Ala Ala Pro 10 15

Ala Val Ala Leu Val Leu Gly Ser Cys Arg Ala Leu Glu Val Ala Asn 20 25 30

Gly Thr Val Thr Ser Leu Pro Gly Ala Thr Val Thr Leu Ile Cys Pro 40 45

Gly Lys Glu Ala Ala Gly Asn Val Thr Ile His Trp Val Tyr Ser Gly 50 60

Ser Gln Asn Arg Glu Trp Thr Thr Gly Asn Thr Leu Val Leu Arg 65 70 75 80

Asp Val Gln Leu Ser Asp Thr Gly Asp Tyr Leu Cys Ser Leu Asn Asp 90 95

His Leu Val Gly Thr Val Pro Leu Leu Val Asp Val Pro Pro Glu Glu

100 105 110

Pro Lys Leu Ser Cys Phe Arg Lys Asn Pro Leu Val Asn Ala Ile Cys 115 120 125 Glu Trp Arg Pro Ser Ser Thr Pro Ser Pro Thr Thr Lys Ala Val Leu 130 135 140 Phe Ala Lys Lys Ile Asn Thr Thr Asn Gly Lys Ser Asp Phe Gln Val 145 150 155 160 Pro Cys Gln Tyr Ser Gln Gln Leu Lys Ser Phe Ser Cys Gln Val Glu 165 170 175 Ile Leu Glu Gly Asp Lys Val Tyr His Ile Val Ser Leu Cys Val Ala 180 185 Asn Ser Val Gly Ser Lys Ser Ser His Asn Glu Ala Phe His Ser Leu 195 200 205 Lys Met Val Gln Pro Asp Pro Pro Ala Asn Leu Val Val Ser Ala Ile 210 215 220 Pro Gly Arg Pro Arg Trp Leu Lys Val Ser Trp Gln His Pro Glu Thr 225 230 235 240 Trp Asp Pro Ser Tyr Tyr Leu Leu Gln Phe Gln Leu Arg Tyr Arg Pro 245 250 255 Val Trp Ser Lys Glu Phe Thr Val Leu Leu Pro Val Ala Gln Tyr 260 265 270 Gln Cys Val Ile His Asp Ala Leu Arg Gly Val Lys His Val Val Gln 275 280 285 Val Arg Gly Lys Glu Glu Leu Asp Leu Gly Gln Trp Ser Glu Trp Ser 290 295 300 Pro Glu Val Thr Gly Thr Pro Trp Ile Ala Glu Pro Arg Thr Thr Pro 305 310 315 320 Ala Gly Ile Leu Trp Asn Pro Thr Gln Val Ser Val Glu Asp Ser Ala 325 330 335 Asn His Glu Asp Gln Tyr Glu Ser Ser Thr Glu Ala Thr Ser Val Leu 340 345 350

Ala Pro Val Gln Glu Ser Ser Ser Met Ser Leu Pro 355 360

egicus

<400> atgctggccg tcggctgcac cctgctggtc gccctgctgg ccgcgcccgc agtcgcgctg 60 gtccttggga gctgccgcgc gctggaggtg gcaaatggta cggtgacgag cctgccaggg 120 gccactgtta ccctgatctg ccctgggaag gaagcagcag gcaatgctac cattcactgg 180 gtqtactcag gctcacagag cagagaatgg actaccacgg gaaacacact ggttctgagg 240 qccqtqcagq tcaatgacac tgggcactat ttgtgcttcc tggatgatca tctggttggg 300 actgtqccct tgctggtgga tgttccccca gaggagccca agctctcctg cttccggaag 360 420 aaccccttg taaatgcctt ttgtgagtgg catccaagca gcactccctc tccaaccacg aaggctgtga tgtttgcaaa gaaaatcaac accaccaatg ggaagagtga cttccaggtg 480 ccttgccagt attctcagca gctgaaaagc ttctcctgcg aggtggagat cctggagggt 540 600 gacaaagtgt accacatagt gtcactgtgc gttgcaaaca gtgtcggaag caggtccagc cacaatqtaq tatttcagag tttaaaaatg gtgcagccgg atccacctgc caaccttgtg 660 720 gtatcagcca tacctggaag cctcgttggc tcaaagtcag ttggcaagac cctgagtcct gggacccaag ttactacttg ttgcaattcg agcttcgata ccgacctgta tggtcaaaga 780 840 acqttcacqg tgtggccgct ccaggtggcc cagcatcaat gtgtcatcca tgatgccttg cqaqqaqtaa agcatgtggt gcaggtccga gggaaggagg agtttgacat tggccagtgg 900 agcaaatggt ccccggaggt cacaggcact ccttggctag cagagcccag gaccactccg 960 1020 qcaqqqatcc cqqqqaaccc cacacaggtc tctgttgaag actatgacaa ccacgaggat cagtacggaa gttctacaga agcaacgagt gtcctcgccc cagtgcaagg atcctcgcct 1080 atacccctgc ccacattcct ggtagctgga ggaagcctgg cgtttggatt gcttctctgt 1140 1200 qtcttcatca tcttgagact caagaagaaa tggaagtcac aggctgagaa ggaaagcaag 1260 acgacttctc ccccaccgta tcccttggga ccgctgaagc cgaccttcct cctggttcct ctcctcaccc catcagggtc ccataacagc tctgggactg acaacaccgg aagccacagc 1320 tgcctgggtg tcagggaccc acagtgccct aatgacaaca gcaacagaga ctacttattc 1380 1389 cccagataa

<210> 10 <211> 364 <212> PRT

<213> Rattus norvegicus

<400> 10

Met Leu Ala Val Gly Cys Thr Leu Leu Val Ala Leu Leu Ala Ala Pro 1 10 15 Ala Val Ala Leu Val Leu Gly Ser Cys Arg Ala Leu Glu Val Ala Asn 20 25 30 Gly Thr Val Thr Ser Leu Pro Gly Ala Thr Val Thr Leu Ile Cys Pro 35 40 45 Gly Lys Glu Ala Ala Gly Asn Ala Thr Ile His Trp Val Tyr Ser Gly 50 60 Ser Gln Ser Arg Glu Trp Thr Thr Gly Asn Thr Leu Val Leu Arg 65 70 75 80 Ala Val Gln Val Asn Asp Thr Gly His Tyr Leu Cys Phe Leu Asp Asp 90 95 His Leu Val Gly Thr Val Pro Leu Leu Val Asp Val Pro Pro Glu Glu 100 105 Pro Lys Leu Ser Cys Phe Arg Lys Asn Pro Leu Val Asn Ala Phe Cys 115 120 125 Glu Trp His Pro Ser Ser Thr Pro Ser Pro Thr Thr Lys Ala Val Met 130 140 Phe Ala Lys Lys Ile Asn Thr Thr Asn Gly Lys Ser Asp Phe Gln Val 145 150 155 160 Pro Cys Gln Tyr Ser Gln Gln Leu Lys Ser Phe Ser Cys Glu Val Glu 165 170 175 Ile Leu Glu Gly Asp Lys Val Tyr His Ile Val Ser Leu Cys Val Ala 180 185 190 Asn Ser Val Gly Ser Arg Ser Ser His Asn Val Val Phe Gln Ser Leu 195 200 205 Lys Met Val Gln Pro Asp Pro Pro Ala Asn Leu Val Val Ser Ala Ile 210 215 220 Pro Gly Ser Leu Val Gly Ser Lys Ser Val Gly Lys Thr Leu Ser Pro 225 230 235 240

Gly Thr Gln Val Thr Thr Cys Cys Asn Ser Ser Phe Asp Thr Asp Leu 245 250 255

Tyr Gly Gln Arg Thr Phe Thr Val Trp Pro Leu Gln Val Ala Gln His 260 265 270

Gln Cys Val Ile His Asp Ala Leu Arg Gly Val Lys His Val Val Gln 275 280 285

Val Arg Gly Lys Glu Glu Phe Asp Ile Gly Gln Trp Ser Lys Trp Ser 290 295 300

Pro Glu Val Thr Gly Thr Pro Trp Leu Ala Glu Pro Arg Thr Thr Pro 305 310 315 320

Ala Gly Ile Pro Gly Asn Pro Thr Gln Val Ser Val Glu Asp Tyr Asp 325 330 335

Asn His Glu Asp Gln Tyr Gly Ser Ser Thr Glu Ala Thr Ser Val Leu 340 345 350

Ala Pro Val Gln Gly Ser Ser Pro Ile Pro Leu Pro 355 360

<210> 11 <211> 1407 <212> DNA <213> Human

<400> atgctggccg tcggctgcgc gctgctggct gccctgctgg ccgcgccggg agcggcgctg 60 gccccaaggc gctgccctgc gcaggaggtg gcgagaggcg tgctgaccag tctgccagga 120 gacagcgtga ctctgacctg cccgggggta gagccggaag acaatgccac tgttcactgg 180 gtqctcagga agccggctgc aggctcccac cccagcagat gggctggcat gggaaggagg 240 ctgctgctga ggtcggtgca gctccacgac tctggaaact attcatgcta ccgggccggc 300 cqcccaqctq qqactgtgca cttgctggtg gatgttcccc ccgaggagcc ccagctctcc 360 tgcttccgga agagccccct cagcaatgtt gtttgtgagt ggggtcctcg gagcacccca 420 tccctgacga caaaggctgt gctcttggtg aggaagtttc agaacagtcc ggccgaagac 480 ttccaggagc cgtgccagta ttcccaggag tcccagaagt tctcctgcca gttagcagtc 540 600 ccqqaqqqaq acagctcttt ctacatagtg tccatgtgcg tcgccagtag tgtcgggagc aagttcagca aaactcaaac ctttcagggt tgtggaatct tgcagcctga tccgcctgcc 660 720 aacatcacag tcactgccgt ggccagaaac ccccgctggc tcagtgtcac ctggcaagac 780 cccactcct ggaactcatc tttctacaga ctacggtttg agctcagata tcgggctgaa

cggtcaaaga	cattcacaac	atggatggtc	aaggacctcc	agcatcactg	tgtcatccac	840
gacgcctgga	gcggcctgag	gcacgtggtg	cagcttcgtg	cccaggagga	gttcgggcaa	900
ggcgagtgga	gcgagtggag	cccggaggcc	atgggcacgc	cttggacaga	atccaggagt	960
cctccagctg	agaacgaggt	gtccaccccc	atgcaggcac	ttactactaa	taaagacgat	1020
gataatattc	tcttcagaga	ttctgcaaat	gcgacaagcc	tcccagtgca	agattcttct	1080
tcagtaccac	tgcccacatt	cctggttgct	ggagggagcc	tggccttcgg	aacgctcctc	1140
tgcattgcca	ttgttctgag	gttcaagaag	acgtggaagc	tgcgggctct	gaaggaaggc	1200
aagacaagca	tgcatccgcc	gtactctttg	gggcagctgg	tcccggagag	gcctcgaccc	1260
accccagtgc	ttgttcctct	catctcccca	ccggtgtccc	ccagcagcct	ggggtctgac	1320
aatacctcga	gccacaaccg	accagatgcc	agggacccac	ggagccctta	tgacatcagc	1380
aatacagact	acttcttccc	cagatag				1407

<210> 12 <211> 365 <212> PRT

<213> Human

<400> 12

Met Leu Ala Val Gly Cys Ala Leu Leu Ala Ala Leu Leu Ala Ala Pro $10 \ 15$

Gly Ala Ala Leu Ala Pro Arg Cys Pro Ala Gln Glu Val Ala Arg 20 25 30

Gly Val Leu Thr Ser Leu Pro Gly Asp Ser Val Thr Leu Thr Cys Pro 35 40 45

Gly Val Glu Pro Glu Asp Asn Ala Thr Val His Trp Val Leu Arg Lys 50 60

Pro Ala Ala Gly Ser His Pro Ser Arg Trp Ala Gly Met Gly Arg Arg 65 70 75 80

Leu Leu Leu Arg Ser Val Gln Leu His Asp Ser Gly Asn Tyr Ser Cys 90 95

Tyr Arg Ala Gly Arg Pro Ala Gly Thr Val His Leu Leu Val Asp Val 100 105 110

ro Pro Glu Glu Pro Gln Leu Ser Cys Phe Arg Lys Ser Pro Leu Ser 115 120 125

Asn Val Val Cys Glu Trp Gly Pro Arg Ser Thr Pro Ser Leu Thr Thr 130 140 Lys Ala Val Leu Leu Val Arg Lys Phe Gln Asn Ser Pro Ala Glu Asp 145 150 155 160 Phe Gln Glu Pro Cys Gln Tyr Ser Gln Glu Ser Gln Lys Phe Ser Cys 165 170 175 Gln Leu Ala Val Pro Glu Gly Asp Ser Ser Phe Tyr Ile Val Ser Met 180 185 190 Cys Val Ala Ser Ser Val Gly Ser Lys Phe Ser Lys Thr Gln Thr Phe 195 200 205 Gln Gly Cys Gly Ile Leu Gln Pro Asp Pro Pro Ala Asn Ile Thr Val 210 215 220 Thr Ala Val Ala Arg Asn Pro Arg Trp Leu Ser Val Thr Trp Gln Asp 225 230 235 240 Pro His Ser Trp Asn Ser Ser Phe Tyr Arg Leu Arg Phe Glu Leu Arg 245 250 255 Tyr Arg Ala Glu Arg Ser Lys Thr Phe Thr Thr Trp Met Val Lys Asp 260 265 270 Leu Gln His His Cys Val Ile His Asp Ala Trp Ser Gly Leu Arg His 275 280 285 Val Val Gln Leu Arg Ala Gln Glu Glu Phe Gly Gln Gly Glu Trp Ser 290 295 300 Glu Trp Ser Pro Glu Ala Met Gly Thr Pro Trp Thr Glu Ser Arg Ser 305 310 315 320 Pro Pro Ala Glu Asn Glu Val Ser Thr Pro Met Gln Ala Leu Thr Thr 325 330 335 Asn Lys Asp Asp Asp Asn Ile Leu Phe Arg Asp Ser Ala Asn Ala Thr 340 345 350 Ser Leu Pro Val Gln Asp Ser Ser Ser Val Pro Leu Pro 355 360 365